VIRGINIA WILDLIFE

AUGUST 1989 ONE DOLLAR

Volume 50

VIRGINIA WILDLIFE

Number 8

photo by Jeff Curtis

Cover: This month, look for a yellow-crowned night heron *(Nycticorax violaceus)* stalking our saltwater tidal creeks, particularly around Virginia Beach and the Eastern Shore. Photo by Rob Simpson. Also look for the great blue heron *(Ardea herodias)* featured on the *inside cover* (photo by Vinyard Bros.) around marshes, ponds, streams and rivers in Virginia. Both are two of the nongame animals that the Virginia Department of Game and Inland Fisheries has its eye on as caretaker of Virginia's native fish and wildlife. You can help us ensure that we are able to do our job by contributing to Virginia's Nongame and Endangered Species Fund. Fill out the gray card in the back of this magazine and send your donation in. You'll be doing your part to keep wildlife around.

Back cover: Beach grass; photo by Rob Simpson

Features

August Journal

A Full-Ti

I spent a lot of time hunting ducks last quail season. Not that I had my setter out pointing coveys of mallards, although that would have been an interesting novelty. It's simply that I spent a lot of time looking for ducks when the quail hunting was slow, which was most of the time.

I received permission to hunt a waterfront farm last year that had terrific looking quail habitat. There were hedgerows, hardwood swamps, and greenbrier thickets, and some 20 acres along the shoreline had been left out of cultivation to form a buffer strip to retard stormwater runoff. Most of the farm had been planted in soybeans, and when the beans were harvested in late October the combines managed to spill enough to leave ample gleanings for quail.

The problem was, there were too few quail to take advantage of this wealth. We found a couple of small coveys early in the season, and during the month of January we found few birds at all.

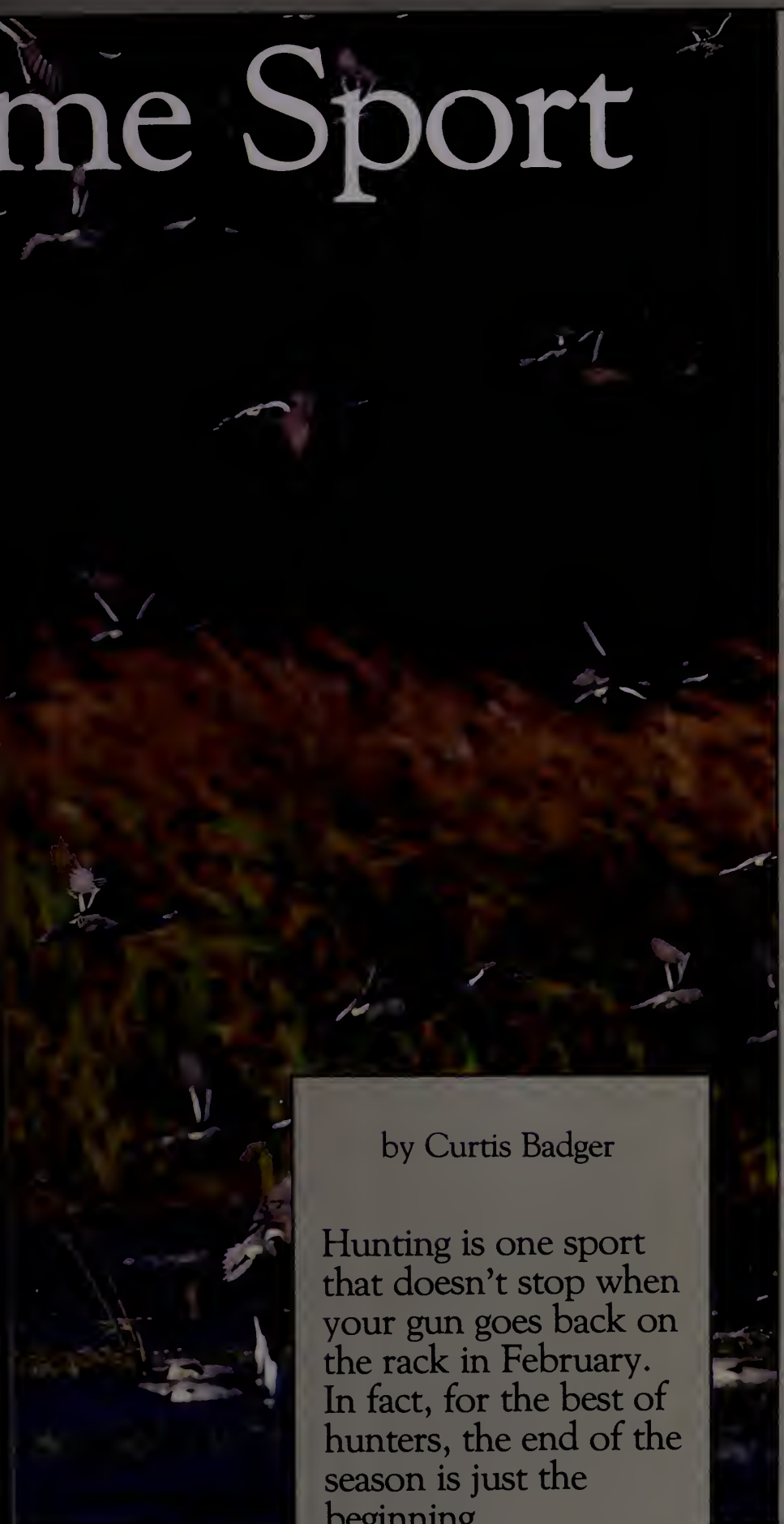
So, as the end of the season neared I went to the farm more to exercise the dog than to hunt birds. I often took the binoculars instead of the shotgun; the view of the creek and the marsh was spectacular, and I began to watch the ducks and to make plans for next season.

The 1988-89 quail season for me was roughly equivalent to what the Baltimore Orioles accomplished during the 1988 baseball season. Long before the season is over you learn to write it off, to experiment, to use the present to build for the future. So, on many quail trips last year I was really duck hunting, and sometimes deer hunting, which is really not a bad idea, even when times are good.

You don't become a successful hunter by waiting until the evening before opening day to organize your equipment and plan your hunt. Hunting is actually a full-time sport; only the taking of game is limited by the legal seasons.

Last January and February I managed to build what I believe should be a good foundation for the upcoming waterfowl season. I did most of my scouting during quail season, or after

me Sport



Pintails, photo by Larry Ditto.

by Curtis Badger

Hunting is one sport that doesn't stop when your gun goes back on the rack in February. In fact, for the best of hunters, the end of the season is just the beginning.

the season when taking the dog for exercise runs. I keep an informal journal, because I don't trust my memory, and I've found that over time the journal gives me a good indication of the patterns and habits of wildilfe. For example:

February 11, Saturday: Took Smoke up to the farm for a run. On the creek, there were a few mergansers and buffleheads swimming over an oyster rock off a pine point. But, at the head of the creek were a couple of dozen black ducks and mallards, and probably 150 green-winged teal, more teal than I've ever seen in one concentration. Must be moving back north.

March 16, Thursday: Took Smoke for a late afternoon run at the farm. The blacks and mallards are still there, as are the dippers. Saw some scaup in the deeper water. Thought the teal had left, but then spotted them under the far shore, snoozing in the sun. There appeared to be fewer of them, but some might be back in the marsh out of view.

March 25, Saturday: The teal are still on the creek, with more blue-wings in now. Lots of black ducks and mallards concentrated at a freshet at the head of the creek. Teal sleeping in the shallows. A red-tailed hawk kept circling and shrieking, but the ducks paid it no mind.

I went to the farm at least once a week from quail season until the waterfowl finally moved out in late April, and over those weeks a pattern emerged. At the head of the creek is a little freshet where the dabbling ducks like to congregate. The creek is narrow and shallow here, but there is lots of marsh, providing food and shelter. There were black ducks here on every trip, and usually a few mallards. The teal preferred a wide, shallow part of the creek just downstream from the freshet. Sometimes they would come in groups of three or four to drink and feed at the freshet, but most of the time they stayed in the wide shallows, foraging along the bottom with only their tails showing, looking from a distance like a hundred tumps of bottom mud emerging from the water. Two great blue herons hung out at the freshet, and their presence seemed to give the dabbling ducks confidence.

Diving ducks preferred the deeper water farther downstream, although

often I would see mergansers and bufleheads swimming among the teals and black ducks. They seemed sociable, their heads raised and alert as they swam along enthusiastically among the sleepy teal and the indifferent black ducks.

The diving ducks usually congregated along an oyster rock that was covered with water except during extreme low tides. A few pilings had been left from an old dock, and the oysters were growing in thick beds around the pilings and on submerged logs. The diving ducks, I suppose, were feeding on small fish and crustaceans attracted to the oyster bed, or perhaps they were feeding on oyster parasites.

There is no guarantee, of course, that the teal will be back next fall, that the blacks and mallards will return to the freshet, or that the divers will again feed at the oyster bed. But wildlife, like humans, are creatures of habit, and unless someone builds a subdivision on the creek shore between now and November, I bet the birds will be back.

The birds obviously consider the head of this particular creek a sanctuary, and it will be difficult to hunt them without driving them out. So we won't build a blind—we'll use the little layout boat—and we'll limit the hunt to just a few days, and then just an hour or so a day. Because teal obviously like the place, it should be good for a hunt or two during the early season. Then we'll hunt the freshet a time or two, and then the diving ducks father out the creek.

Although I'm looking forward to hunting the ducks, I don't want to spoil their sanctuary. I spent too many enjoyable hours there last winter and spring, crouching behind a dead cedar with the binoculars, watching the teal feed, sleep, preen, and begin their mating rituals.

Pre-season and post-season scouting obviously is not simply a hunting tool, but a pleasurable activity in itself. Certainly, I depend upon these trips to locate good waterfowl habitat, to find coveys of quail, and to locate deer trails and rubs. But mainly they give

me an excuse to be in the woods when the legal season is over.

There is a fundamental difference between hunting and shooting, one which too often is blurred. Hunting provides an education in animal behavior. It has to do with scouting, observation, study, reasoning, and the development of physical skills. Shooting is a part of hunting, but it occupies only a narrow spectrum. It is important, certainly. To be a good hunter you must know the capability of your firearm or bow, and you must be able to use it quickly, safely, accurately, and with certainty. But hunting goes far beyond the ability to shoot, and it doesn't end on the day when the law decrees that weapons be put aside. Hunting is a sport of many skills, and shooting is only one of them.

Summer is the perfect time to hone your skills and test your hunting equipment; photo by Larry Ditto.

Hunting skills are especially vital for the sport of deer hunting. If you want to be successful, you don't wait until opening day to take to the woods. Rob Davis, an Eastern Shore resident who has been a bowhunter for 38 years, believes that the sport of hunting never ends; it's just that for much of the year he has to leave his bow at home.

Davis advises hunters to spend as many hours as they can in the woods prior to the hunting season to learn where the deer trails are and to scout possible tree stand locations. "Deer don't get big by being dumb," says Davis. "You have to be careful going in. If you drive the deer away a couple of times, they won't use the same area again for a while. Pay attention to the wind currents, don't make a lot of noise, and use a cover scent. I used to use a fox scent, but last year I found four dead skunks on the road in the area I hunted, so I began using skunk scent. It really paid off."

Learning where deer eat and sleep, and finding their preferred trails between these areas, is a basic part of Davis' scouting procedure, but a study of deer should not end there, he says. Hunters need to know deer anatomy—where a shot should be placed for a quick, clean kill. "The heart-lung area is in an oval area about nine-by-fourteen inches," says Davis. "If you hit a deer there, it will fall in a matter of seconds. When I hit a deer in the heart-lung area, I'll begin counting—one-thousand-one, one-thousand-two—and so on. I've never gotten above seven. If you hit a deer in the heart or lungs and it goes into the brush, you can usually wait a few seconds and you'll hear it fall. The heart is at the bottom of the heart-lung area, and that's usually what I aim for, even though its a small target. I figure that if I hit it, the deer will die almost instantly. If I shoot low the deer won't be hurt at all."

Knowing the habits, habitat, and anatomy of deer is a must for bowhunters and firearms hunters, Davis says. "You have to get to know the area," he says. "Deer need a sheltered place to rest and sleep, and they need a convenient source of food. You have to be willing to do your scouting. I use topo maps a great deal, especially if I'm traveling to an unfamiliar area. Many times I can find promising areas, and eliminate poor habitat, just by closely studying the topos."

Davis uses his bow year-round, and recommends that serious hunters do the same. His home on the Delmarva Peninsula is within a few minutes drive of excellent saltwater fishing, and local ponds and creeks offer quite a few freshwater species. Davis fishes quite a bit, but he characteristically prefers the bow to a rod and reel. His photo album is filled with pictures of friends and family members posing with sharks, stingrays, carp, and other fish.

"Bowfishing is great practice," says Davis. "You're shooting down on a target as you would from a stand, and your target is moving. With bowfishing, I can use my bow all year."

Davis, a mechanical engineer, regularly gets in some bowfishing during his lunch hour. "It doesn't take me an hour to eat a sandwich, so I'll go down to a local pond and bowfish for a while."

On weekends during the summer, Davis and his bowfishing friends are out for larger quarry. In the seaside bays and creeks, Davis uses his 16-foot outboard to bowfish for sharks and rays. He has caught quite a few that go over 100 pounds.

"I think it's important to use your bow all year," he says. "You can't just wait until the opening day of deer season and expect to go out and do well. I bowhunt twelve months a year. I bowfish in the summer, and in the fall I hunt squirrels, rails, rabbits, and pheasants. it's all part of staying sharp, and anyway, I just enjoy being out there."

That's the bottom line, and as hunters we can all take advantage of "being out there" to improve our skills in the field—in and out of hunting season. □

Curtis Badger is director of publications for the Wildlife Art Museum of the Ward Foundation in Maryland and is a frequent contributor to Virginia Wildlife.

Offbeat Dove Hunting

Dove hunting can be just that—a *hunting* rather than a *shooting* sport—if you're willing to put out a little effort.

photo by Bob Gooch

by Bob Gooch

Hunt for doves?

Some of us do out of necessity.

Sure, I've enjoyed some of those big dove shoots. I've been in big grain fields where several dozen hunters are stationed strategically, and hungry doves swarming into the field are kept flying by endless volleys of gunfire. They're social events; they're fun, and I rarely turn down an invitation.

But I don't hunt on such shoots. Someone else has already done that for me. I just shoot—and miss, miss again, and then connect enough times to take some birds home.

But I also *hunt* doves. In my small corner of the Old Dominion, big grainfields are a rarity anymore. Dove shooting is harder to come by. First, you have to locate the doves. It isn't easy, but over the years I suspect I've bagged more doves than I have any other species of game. Quail might be close. I haven't kept an accurate score, but in the recent years of declining bobwhite populations, doves are far ahead.

As the waning days of August point toward the September dove opening, I find myself alert for signs of birds as I move about my neighborhood. Doves begin to congregate on utility lines and in dead trees. Watering birds flush from stream sandbars on late-summer fishing trips, or flush from the gravel shoulders and fly back and forth across the highways I travel. Preseason scouting you might call it, though it's casual at the best.

Still it helps locate concentrations of birds. And often you find them in the strangest places. Doves feed on a variety of grains and seeds, and it doesn't take them long to locate crack feeding areas. Staying alert for such possibilities can lead to some good dove shooting. A freshly harvested cornfield may be the conventional site of a fast dove shoot, but the possibilities don't end there.

Growing corn is a declining agricultural practice in my rural neighborhood, and even the few fields that exist are rarely harvested by the September opener. That was the case one recent September as I watched in vain for the harvesting machines to bare the few fields I had access to. Still, there were plenty of doves around.

I finally located some good shooting that September within a half mile of my home . . . in a cow pasture! I more or less stumbled on it when I noticed about a dozen birds resting on a utility line that ran through the pasture. The pasture was heavily grazed, but it offered the kind of bare or clean ground doves frequent. Plus, the pasture offered weeds that cattle were not eating. By September, those weeds were beginning to drop their seeds and the birds had found them.

A little observation established two avenues the doves were using in entering the field. They would circle it rapidly, alight to feed, then fly to some maples at one end of the pasture to rest. There was also a farm pond near the maples that provided water. A dry summer had exposed mud flats where the birds could water without making themselves vulnerable to predators lurking in the heavy cover that normally crowded the water's edge.

I had several options. I could take a stand at either of the avenues of approach, take one near the middle of the field where the birds did most of their feeding, or set up near their approach to the maples. I chose what seemed to be the busiest approach to

the field and unfolded my battered dove stool in the shade of a small cedar.

My wait wasn't long. The whistle of wings overhead caught my ear in time to pick up a couple of gray ghosts zeroing in on the field. I missed the first, but connected with my next shot and a new dove season was underway.

I usually hunted that little pasture alone. It wasn't large enough to support heavy shooting—even though there were probably a dozen birds feeding at any given time. A friend did join me for several shoots. He took one of the approach routes and I the other.

I never limited out in that pasture, but I always enjoyed a couple of hours of shooting and dropped some tasty dove breasts in the freezer.

There are some precautions to take when "pasture hunting," however, something I learned a decade ago when I was hurting for a place to hunt.

"I'll tell you where you can find some doves if you promise not to mention it," said a non-hunting neighbor. "Told someone else he could hunt there. He asked me not to tell anyone else, but I'll tell you."

It had been another dry summer and the neighbor was already feeding his cattle. The birds had found the feeding area and were getting fat on the scattered hayseeds. Certainly it wasn't the kind of shooting to support a lot of hunters. Little did I know that it was going to be hard enough to support just one. Upon arriving on the field, I realized that my shooting did more than bring down birds. It brought over cattle. Rather than being alarmed by the shooting, the cattle were attracted to it, and I found myself picking up birds between white-faced Herefords. Eventually, the cattle all but surrounded me and I gave up.

But, don't give up on a cornfield just because it has not been harvested. Watch for awhile and if you see doves circling, they're probably feeding in the field. Maybe not on loose corn, but on the seeds of the sparse ground cover. That was the case a recent September in an unharvested field where I had permission to hunt. The cornfield bordered a sizeable creek, home to a

Dove hunting doesn't have to end when you run out of cut cornfields. Doves are opportunists—you should be, too. Photo by William Lea.

colony of busy beavers. They were raiding the field and had actually cleared small patches, leaving scattered grain and exposing seedy weeds.

Two friends and I hunted that five to six-acre field frequently and enjoyed some good shooting, though admittedly it improved considerably once the corn was harvested in late October.

The late dove season also can provide unusual opportunities, offbeat hunting when compared to the conventional early-season dove shoot.

I recall with a good deal of nostalgia one December when a six-inch snow covered the countryside. Beautiful and spectacular, but no weather for hunting. Certainly not for doves. Still, a call from a frequent hunting friend sent me reaching for my favorite dove gun.

"You won't believe it," he said.

What he had found was some prime shooting in a snow-covered hayfield. It had been harvested several times, but the late mowing had been skipped. Grass and weeds with seed-filled heads covered the field. My friend, weary of the fireside, was out just enjoying the country when he noticed doves circling that snowy hayfield. And then coming down in it!

Doves are opportunists when it comes to finding food, and that six-inch snowfall, now slightly melted and crusted over, had raised the bird's feeding level to near the crowns of those patches of grass and weeds. The word had apparently spread quickly in the dove community. They were using that field heavily.

Finding a suitable stand was our biggest problem, but by taking advantage of a scattered tree or two and some convenient farm buildings, we were able to enjoy some fast late-season shooting. Some friends went back later, covered themselves in old white bed sheets, and enjoyed even better shooting.

"Saw a bunch of doves feeding on pokeberries," the local game warden told me one fall. I believe it was November, and that year the middle segment of the split dove season was open.

I decided to check it out. The patch he directed me to was fairly large, and I flushed some doves as I neared it. The berries were the attraction, and the big leafy plants had eliminated most of the ground cover. The near-bare earth was littered with the dark red berries. A hungry dove couldn't ask for more.

The pokeberry patch was in a cut-over area and finding a suitable stand was no problem.

A few years ago I often enjoyed some fast, but limited, dove shooting practically in my front yard. Thirty years earlier my wife and I had planted some spruce trees there to give us some protection from the north winds. Now full grown, they provide a warm haven for all kinds of roosting birds.

Doves used to love that spruce grove on winter nights. I could take a stand there a half hour before sunset and get in some fast shooting for a few minutes before the setting sun made it illegal.

Unfortunately, a colony of crows discovered this haven from the winter cold, and the doves now apparently seek refuge elsewhere. But I plan to sharpen my wing shooting on those black robbers, and make that stand of spruce highly inhospitable for them. Maybe then the doves will come back.

I don't like to hit dove roosts too hard, maybe 15 or 20 minutes near the end of the day, and no more than once a week. It's a limited hunting opportunity, but another kind of offbeat shooting that can put some birds in the game pockets. Look for roosts in evergreen stands, particularly during the late season.

I've never had much luck at pools, ponds, streams or other places doves frequent to water, though I understand this shooting is popular in many western states. Maybe I haven't tried hard enough. So, that still remains a possibility.

Preseason scouting for offbeat hunting opportunities can add an overlooked dimension to dove hunting. Just locating a promising new possibility can be exciting, not to mention the additional shooting you'll enjoy.

Best of all, it puts *hunting* back into a sport that is known primarily for shooting. □

Bob Gooch is an outdoor newspaper columnist and author of several books on hunting and fishing. He lives in Troy near Charlottesvile.

A Tern For The Best

On Craney Island in Portsmouth, an unusual development has created homes for birds—not for humans.

by Spike Knuth

"You have to look right down in front of your feet as you walk," Hank Williamson warned. "If you look up or out too far, and keep walking, you'll step right on 'em." Williamson is the supervisor of the U.S Army Corps of Engineers' Craney Island Disposal Area on the Portsmouth side of Hampton Roads. It's a large, man-made peninsula at the mouth of the Elizabeth River, made from dredge fill and sludge from the U.S. Navy and Corps dredging projects.

Williamson is a tall, rugged-looking, man with a soft spot in his heart for a little bird—the dainty least tern. Least terns have taken a liking to Craney Island's man-made beaches and sand flats. I was part of a small party that walked Craney's sandy terrain to view a colony of these little birds. In addition to Williamson, I was following Dianna Bailey, Public Affairs Officer for the Norfolk District U.S. Army Corps of Engineers, and Ruth Beck, Professor of Biology at the College of William and Mary.

Williamson had been confronted with a problem one spring when a colony of least terns decided to nest on one of the main roads. He could have looked the other way, figuring his job responsibilities came first, and nobody would have known the difference. Instead, he personally went out and bulldozed the road shut with mounds of sand, and had warning signs erected to prevent traffic from disturbing the little birds until they brought off their broods. He did all this while continuing to carry out his job duties.

The terns began protesting as soon as we were within 30 yards of their colony, rising into the air, flying above us 25 to 40 feet up. Their shrill *kip-kip* warning call or piercing *ki-deer* warned us away as they circled nervously. When we stopped too long or too close to a nest, they'd dive on us, actually regurgitating food stuffs from their systems, "spitting" on us in an attempt to drive us off.

The eggs and young were perfectly camouflaged, which is why Williamson and Beck had to warn us about where we stepped. The eggs blended in perfectly with the ground. The tiny

The least tern has found a nesting place on the man-made Craney Island in Portsmouth. **Above:** *Ruth Beck prepares to band one of Craney Island's least terns; photo by Spike Knuth.* **Above right:** *Least tern in flight; photo by Dana Bradshaw.* **Right:** *A least tern's shallow nest reveals a well-camouflaged least tern chick and egg; photo by Spike Knuth.*

young were of varying shades and markings, and they squatted down trying to avoid detection. Sometimes they sought refuge in the shade of sparse, low-growing vegetation. Beck began to be concerned that the hot sun would "bake" them, and advised us to try to shade them while we looked at them and to move on quickly so the parent birds could get back to them.

The least tern, *Sterna albifrons antillarum*, is one of over 50 species and subspecies of terns distributed throughout the world and one of 10 that are common to North America. *Albifrons* means "white-foreheaded," which it has, along with satiny white underparts. Its crown, nape and stripe from eye to bill is black, while its upper back, wings and tail are pearl gray. The least tern's small, pointed, yellow bill is tipped with black and its feet are small and yellow. At rest on sandbars, poles or floating logs, their long, narrow wings stick out beyond their forked tails. Their flight is light, buoyant and graceful as they fly with rapid, fluttery wing beats. The least tern is the smallest of our terns, measuring 8½ to 9 inches or so. The least tern goes by a variety of other names, including sea swallow, silver ternlet, little striker, little tern, minute tern, pond tern, "oyt," and killin' peter.

In the late 1800s, they swarmed over our coastal waters by the thousands. However, supported by the millinery trade, feather hunters decimated their populations. For a dime a piece, hundreds were killed every day and one record tells us of some 10,000 of them being shot in a single season on Cobb Island, Virginia. The beaches at the entrance to Back River were said to have once hosted huge colonies which were all but wiped out.

Most of this killing was done during the breeding season, so often the newly hatched downy young were left to die by starvation, predation by gulls or heat from the summer sun. Like many other flocking shorebirds, they had a habit of returning to an injured comrade, making them extremely vulnerable to the gun. They were often decoyed by merely throwing a white rag tied to a stick into the air. The falling, fluttering rag would decoy the birds, looking like a falling flock member.

Finally, in the early 1900s, protective measures were taken, due mainly to a fledgling Audubon Society, and the least tern began a comeback. In fact, it became one of the most numerous and common of our terns. Still, because they nest on high shelly beaches, egg hunters, gulls, cats, dogs, raccoons, and beach-loving humans all endanger their survival. The eggs are likely to get crushed underfoot or to end up as lunch for a hungry predator, and the young risk dying from the heat

Least terns are highly protective of their nests, and do not tolerate much disturbance without considerable anxiety. If an intruder is spied within 30 yards of a nest, the parents will circle, dive, spit and scream in an attempt to drive the nuisance off. The problem is, if the parents leave the nest for too long or too frequently, the young risk scorching to death from the hot sun; photos by Dana Bradshaw.

whenever their parents fly off at the approach of intruders. There are even times when high storm tides will wipe out whole colonies. Fortunately, however, the least tern is more adaptable than other related shorebirds, and in a pinch will substitute man-made habitats for the real thing, like a gravelly rooftop of a beach home instead of a high shelly beach.

Least terns feed mainly on small fish such as killifish, silversides and menhaden which they catch by diving on them quickly from the air. They'll also feed on shrimp, marine worms and flying insects that inhabit the coastal marshes. They nest in scattered colonies on dry, sandy beaches or flats amid pebbles, shells, driftwood and other shore debris. The nest depressions, or "scrapes," may contain anywhere from one to four eggs, but more commonly two are laid, occasionally three. The eggs are pale greenish or olive, spotted and blotched with brown or lavender.

The downy young can be buff, sandy or grayish in color with variable dark markings or almost none at all. Studies show that the variable markings and the young's calls help the parent birds to identify their own offspring in the colony.

Not only has Craney Island's beaches, coves, flats and spits provided a new breeding ground for this little bird, but it has given biologists an excellent opportunity to study the bird under somewhat controlled conditions. Under a cooperative agreement between the College of William and Mary, the Department of Game and Inland Fisheries and the Norfolk District Army Corps of Engineers, the least tern is getting some special treatment. Any necessary funding is provided by the Nongame and Endangered Species Fund, composed of donated state tax refunds or outright citizen donations.

The least tern has been nesting on Craney Island at least since 1973 when it was documented by Bill Akers in his master's thesis on the biology of the birds for William and Mary. Craney Island is now one of only two major least tern colonies on the south side of the Chesapeake Bay Bridge Tunnel, according to Beck, who is the coordinator of the project. "We've been monitoring the population since 1973 on a regular basis," Beck pointed out. "Since that time, it has fluctuated at

around 100 pairs depending on what nesting sites happened to be available at Craney."

"The cooperative agreement," Beck continues, "allows us to post the area so that workers are aware of where the birds are nesting." When the birds are protected at this point in their breeding cycle and left undisturbed, they can be finished with their breeding, from courtship though fledged young, in six to seven weeks. Least terns have only one brood per year, but if disturbed, or if nests are destroyed, they'll attempt to renest, prolonging confrontations between bird and man.

An attempt was made to attract birds to controlled areas on Craney by setting up decoys in sites specially created for them by a crew under the supervision of Hank Williamson. Once the decoys successfully attracted nesting pairs, signs marking the areas were posted around the perimeter of each nesting colony. Occasionally the little birds picked a spot not specifically chosen, such as the road site, showing that they had a "mind" of their own. Fill operations, however, hardly skipped a beat.

Since the project started, breeding tern populations have increased threefold. "By attracting the migrating birds to areas of low profile, where work can stop for a time, perhaps we can help them increase their productivity," says Beck. Plus, the fledged young imprint on the area and are more likely to come back.

"The cooperative agreement lets us meet both the birds' needs and the needs of the Corps. By creating nesting sites in areas that historically attract birds, we can limit those areas that they need while the Corps is still able to do its job at Craney," said Beck. "We are just real pleased that the Corps is willing to work though this cooperative agreement."

Least terns breed from Massachusetts to Florida on the coast and in the Mississippi and Missouri Valleys as far north as Iowa. They leave Tidewater in fall, traveling to winter along the Gulf Coast, through Mexico, and Central America to Venezuela and Peru. Hopefully, working agreements between government agencies, private organizations and industry will continue to safeguard the future of birds like the least tern. They need the help. □

Spike Knuth is a writer/artist with the Department's Education Division.

The Dismal Isn't Dismal

The Dismal Swamp has gotten a bad name for itself—one that's totally undeserved.

by Curtis Badger

My first exposure to the Dismal Swamp came in the seventh grade when, like most 13-year-old Virginians, I spent the better part of a year reading a thick blue book about the history of our Commonwealth, courtesy of the Department of Education. Two things stand out in my mind about the Dismal Swamp. George Washington, when he was young and idealistic, tried to drain it. And Colonel William Byrd surveyed the state line through it. Byrd didn't like the swamp very much. He called it, among the phrases that are printable, "a horrible desert . . . the foul damps ascend without ceasing, corrupt the air, and render it unfit for respiration."

I don't recall any discussion that the Dismal might be a place of rare beauty, rich in native wildflowers and giant junipers and cypress, a sanctuary for deer and bear and other wildlife. In all probability, my seventh grade teacher had never been there, and she was relying on the descriptions and impressions of writers she had read in her youth—men such as the redoubtable Colonel William Byrd.

Byrd created a legacy for the Dismal Swamp that is unfair and inaccurate, but his image of the swamp is also one that Virginians seem to take perverse pride in. The Dismal would not be the same without its dark mystery, its beauty that is at once alluring and forbidding.

Even in the days before Byrd's well-documented state line survey, the Dismal's reputation was already being established. Lake Drummond, the two-by-three mile, cypress-lined lake in the heart of the swamp, was named for William Drummond, the first colonial governor of North Carolina. Drummond discovered the lake while on a hunting expedition, of which he, for reasons unknown, was the only survior. Drummond served as governor from 1663 to 1667, but in 1676 he was hanged, drawn, and quatered after being charged with treason.

Through the years, writers visiting the swamp have tried valiantly to prove that there is nothing dismal about the Dismal, but few have enjoyed unqualified success. One of the more notable attempts was made by John Boyle O'Reilly (1844-1890), an Irishman whose book, *Athletics and Manly Sport*, described a canoe trip to the Dismal Swamp.

O'Reilly and a companion paddled two cedar canoes down the Dismal Swamp Canal from Norfolk to Lake Drummond, and reported that "there is no other sheet of water like this anywhere. No other so far removed from the turbulence of life, so defamed, while so beautiful."

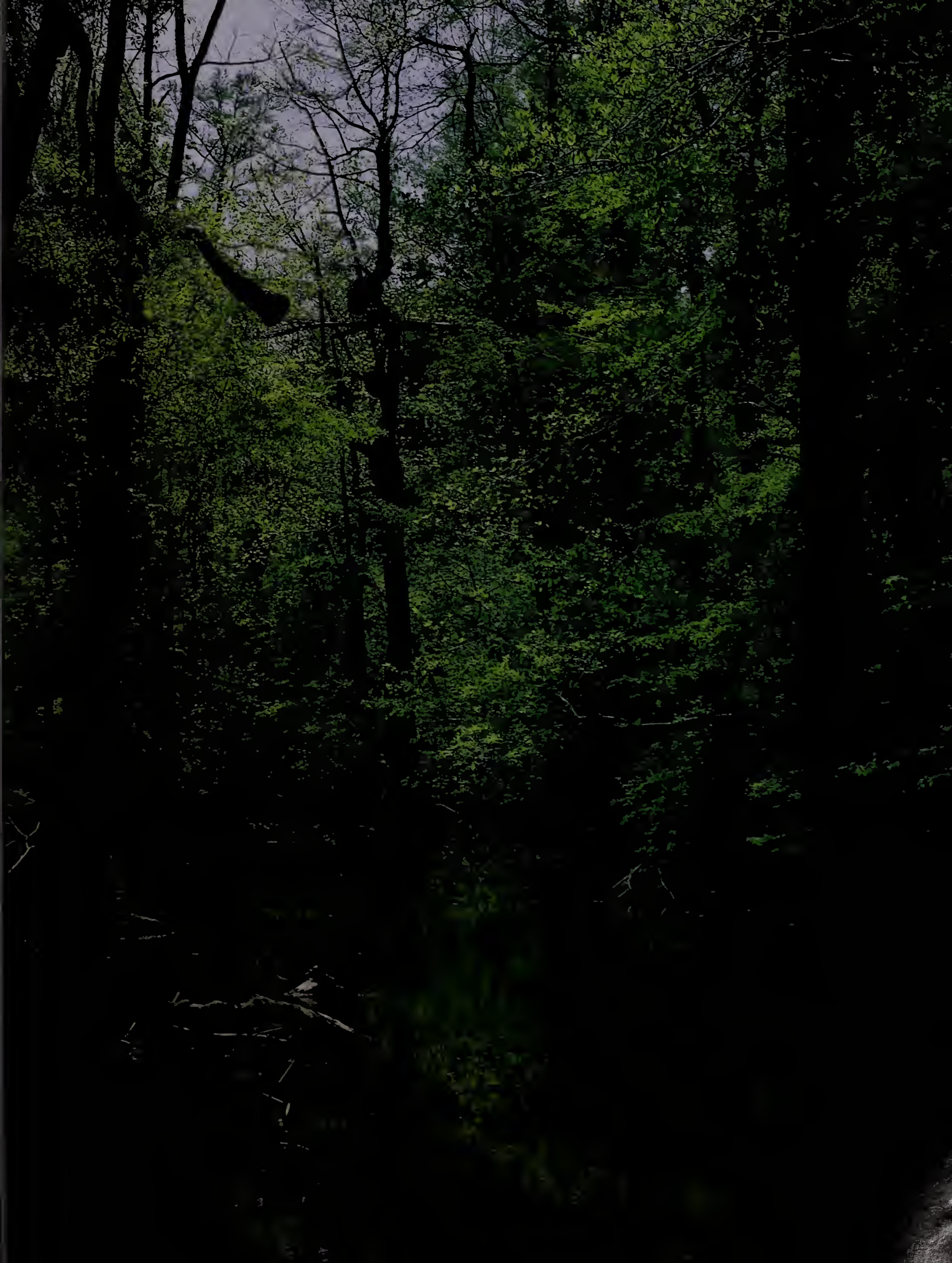
O'Reilly praised the beauty of the swamp and was impressed by the variety of bird life, but he took too literally the local stories about the dangers of the resident reptile population. He wrote that while paddling his canoe he would keep his pistol handy, firing frequently into the cane thickets ahead to deter any cottonmouths that might entertain thoughts of attacking a cedar canoe.

O'Reilly and his handgun escaped the fangs of the cottonmouths, but he apparently fell victim to the barbs of some local pranksters, who convinced him that the cottonmouth was harmless compared to the deadly green poplar snake. "The most dangerous snake in the swamp is one of the smallest," wrote O'Reilly. "He is about 12 inches in length, green in color, like that of the poplar tree in which he lives. We escaped him most fortunately, for before we heard of him we had deflowered many poplars of their beautiful blossoms."

In April, two friends and I made a three-day canoe trip to the Dismal and Lake Drummond. We put in along U.S. Route 17 at the Dismal Swamp Canal, part of the Intracoastal Waterway that provides a protected passage for boat traffic along the East Coast. Intersecting the canal is the Feeder Ditch, a three-mile, man-made waterway that connects the canal with Lake Drummond.

It was late on Friday afternoon when we put in. It has been raining all day, and the winds had been gusting to 30 miles per hour, but the forecast was for clearing skies, so we decided to paddle in to the U.S. Army Corps of

photo by Rob Simpson



Engineers spillway, where there is a small campground. As we were loading the canoes, the Corps lock-keeper was returning from his job at the campsite. He gave us a quick description of the facilities available, and as he hopped into his pickup for the ride home, he left us with the stern warning to beware of the bears.

On a canoe trip to Lake Drummond several years previous, as I was pitching my tent on the Corps campsite, the lock-keeper casually mentioned that on the day before he had killed a rattlesnake "as big around as my arm" just where my tent was situated.

And so the legend lives.

It is strangely satisfying that a place so wild and forbidding should exist just 20 miles from Hampton Roads, where some million-and-one-half people live. Although most of the fearsome tales have about as much credence as O'Reilly's deadly green snakes, the Dismal can still provide a delicious taste of wilderness. The swamp once included many square miles in southeast Virginia and northeast North Carolina, and although many acres have been "reclaimed" as farmland and residential property, the Dismal is still a huge swamp. The Great Dismal Swamp National Wildlife Refuge, which comprises most of the swamp, includes 102,000 acres in Suffolk and Chesapeake in Virginia and three counties in North Carolina.

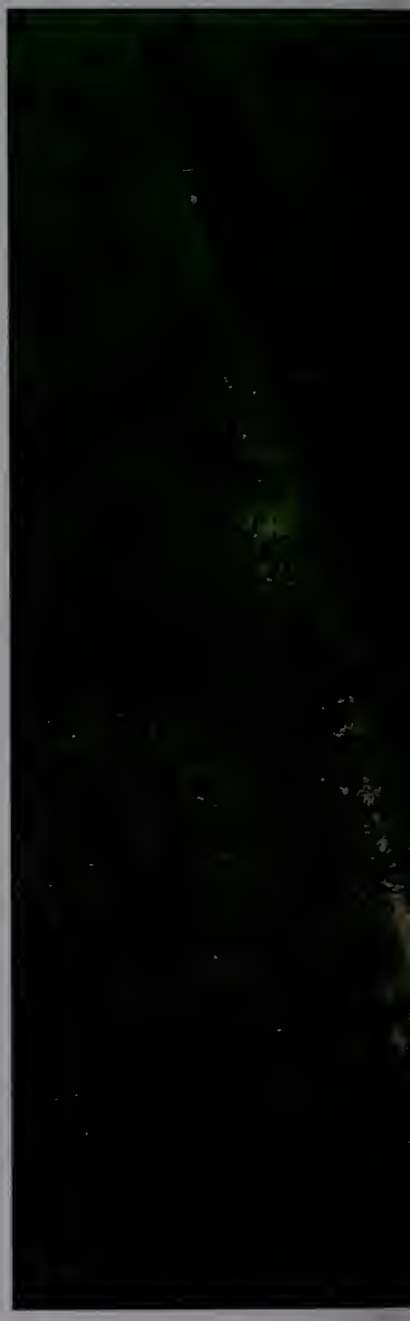
The refuge visitors' center is on the western boundary of the swamp and is reached by taking White Marsh Road from Suffolk. Hiking and bicycling are allowed on the spoil back roads, and an interpretive boardwalk trail is available on Washington Ditch Road.

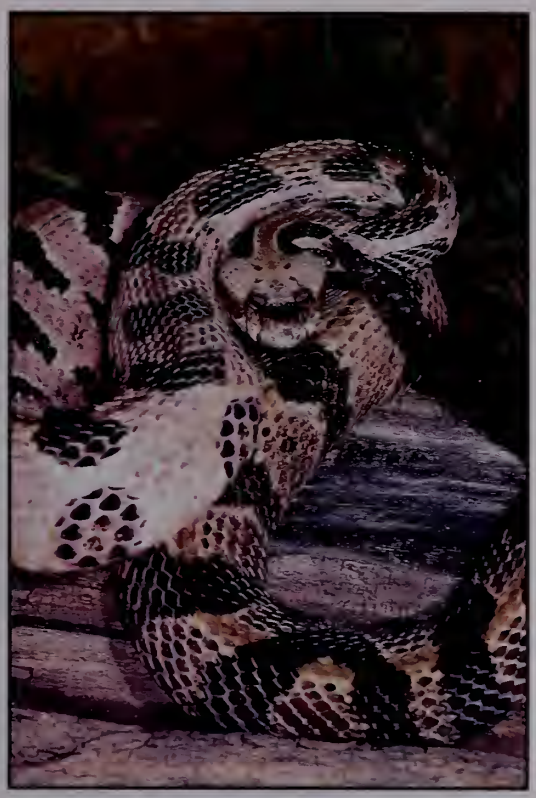
But if you have a few days to spare, consider entering the swamp by canoe from the eastern perimeter. Access is easy. A boat launch facility is located on Route 17 just south of the Feeder Ditch. If you put in there, allow at least an hour for the three-mile paddle up the Feeder to the Corps of Engineers site. The locks at the Corps facility control the water level of Lake Drummond, and in periods of wet weather you might encounter a gentle outflowing current. Still, it is an easy paddle, even for beginners. When we visited in April, the winds were strong, but the Feeder is protected by trees on both sides so we didn't feel the wind at all.

Del Walter, a boatbuilder friend who was on the trip with me looked disbelievingly at the Corps campsite. "I told my wife I was going to the Dismal Swamp. I thought I'd be sleeping on cypress roots and hacking my way through the jungle with a machete."

"The Dismal was described by George Washington as a 'glorious paradise' for wildlife, and that assessment has not changed."

It was nearly dark when we reached the camp which is situated on a narrow peninsula formed by a small channel which intersects with the Feeder and provides a portage area for boaters wishing to bypass the locks and enter Lake Drummond. The camping area is small but well maintained. Several screen houses are available, as are picnic tables, charcoal grills, and a fresh water supply. Restrooms are also present but were out of order when we visited. Campsites are free and are available on a first-come basis. Reservations are not accepted, but it would be a good idea to call before you go to make sure a large group is not expected.





*Jericho Ditch (**left**; photo by Rob Simpson) is one of the early drainage ditches carved out of the swamp, and links up with Washington Ditch which runs into Lake Drummond. It is one of the more attractive ditches to take a walk along.*

*The Dismal is the largest contiguous habitat available in the state to the rare canebrake rattlesnake (**above**; photo by Rob Simpson), and the prothonotary warbler (**below**: photo by Rob Simpson), is one of many songbirds finding the Dismal a wonderful place to nest and raise young. One is never out of hearing or sight of one of the many thousands of prothonotary warblers in the Dismal Swamp throughout the spring and summer.*

The lock-keeper told us that on the previous weekend he had been host to 150 Boy Scouts. On the first night there, we had the place to ourselves.

The Corps campsite is about a quarter of a mile from Lake Drummond. For canoeists, a portage of 50 feet will get you around the spillway and to the higher elevation of the lake. A small motorized tram, weight limit 1000 pounds, is provided for heavier craft. On Saturday morning we were up at first light, and after a quick breakfast of peanut butter sandwiches, we were around the spillway and on our way to Lake Drummond.

The first thing you notice is the quiet. The water is flat calm, and there is only the pull of the paddle and the sound of the canoe cutting through water. Then you learn to listen and you hear other things: the staccato rat-a-tat-tat of a woodpecker, probably a hairy or downy, and deeper in the woods the rhythmic chopping of a pileated. Warblers sing in the tops of the gums and maples, and you can see their bright yellow breasts flashing against the green background as they catch the early sun. A kingfisher flies ahead of our canoes, weaving through the shadows, and just as we reach the lake a pair of wood ducks flush and fly back into the swamp.

The Dismal was described by George Washington as a "glorious paradise" for wildlife, and that assessment has not changed. That the sanctuary is within an hour's drive of more than a million people makes it all the more remarkable and important. The Dismal is the northernmost of the great series of southern coastal swamps, which include the Everglades and the Big Cypress in Florida and the Congaree in South Carolina. About 70 species of birds nest in the swamp, and a much larger number are transients or winter visitors. The Dismal is also home to a number of plants not usually found this far north, among them Spanish moss, jasmine, climbing hydrangea, switch cane, and the beautiful and rare dwarf trillium and wild camelia.

The lake was calm in the early morning, and we paddled along the northern perimeter, weaving in and out of the huge cypress, whose gnarled trunks

were reflected in the dark water. The lake is intersected by numerous ditches, many of which were dug more than 100 years ago. Some are accessible by canoe, and these provide the best opportunities for seeing birds.

The lake seems to hold very little wildlife. I expected to see a few ducks resting on their migration route, as well as some wading birds fishing in the shallows. But the water is very dark with tannic acid, and the aquatic plants necessary to attract wildfowl cannot grow for lack of sunlight. We did see a group of cormorants perched on the blackened pilings which once supported a hunting lodge that had been burned—an eerie sight in the early morning haze.

Hunting lodges were probably the final generation of a colorful genealogy of development in Dismal Swamp. George Washington first visited the Dismal in May 1763 and joined with other entrepeneurs to form the Dismal Swamp Land Company to drain the swamp and convert the land to agricultural purposes. Washington and his associates dug a five-mile-long canal from the western edge of the swamp to Lake Drummond. Washington Ditch is probably the first monument bearing the name of the "father of our country."

Washington and William Byrd had suggested digging a larger canal, linking the Chesapeake Bay and Albemarle Sound in North Carolina, but both thought it too expensive a proposition. But when Patrick Henry, a Dismal Swamp landowner, was governor of Virginia, he pressed for completion of the project, which was authorized by the General Assembly in 1787. The canal was completed in 1805.

Washington's attempts to grow rice and cotton in the peat soil of the swamp failed, and his company turned to lumbering. Washington eventually became disenchanted with his Dismal Swamp project and tried to sell his share to Lighthorse Harry Lee, father of Robert E. Lee. Lee couldn't come up with the purchase price, however, so Washington's share eventually went to his heirs. Ultimately, Camp Manufacturing Company acquired the holdings of Washington's Dismal Swamp

Fishing in the Dismal isn't a top angler's paradise, but it may be one for a kid who likes catching any size, any kind of fish (above; photo by Curtis Badger), or anyone who still can be enchanted by the sight and sound of a woodpecker, such as the downy pictured left; photo by Rob Simpson.

Land Company, and in January 1973 Union Camp Corporation donated 49,000 acres to the Department of the Interior, which formed the core of the refuge.

For an area with no permanent population, the Dismal has an unusually rich history. During the mid-1800s the Lake Drummond Hotel, locally known as Halfway House, enjoyed great popularity and notoriety on the east bank of the canal. The hotel straddled the state line, and it was a haven for duelists and fugitives. Another hotel flourished briefly at the same time; this one was actually on the shores of Lake Drummond, at the intersection of Jericho Ditch.

The swamp was a favorite refuge of runaway slaves just prior to the Civil War, inspiring Harriet Beecher Stowe's novel, *Dred: A Tale of the Great Dismal Swamp*, as well as Longfellow's 1842 poem, "The Slave in the Dismal Swamp."

Probably the best known Dismal Swamp legend is the Lady of the Lake, probably of Indian origin, made popular by Thomas Moore in 1803 in his poem, "The Lake of the Dismal Swamp." The story tells of an Indian princess who dies just before her wedding and who can periodically be seen paddling her white canoe across Lake Drummond. Many hunters and fishermen claim to have seen this ghostly white canoe with its firefly lamp:

They made her a grave, too cold and damp
For a soul so warm and true;
She's gone to the Lake of the Dismal Swamp,
Where all night long, by a firefly lamp,
She paddles her white canoe.

The breeze had picked up by the time we reached Jericho Ditch, and we had to contend with a small chop and a side wind for the return trip across the lake to the Feeder. It was afternoon by the time we reached the campsite, and we decided to have lunch, and then test the local waters for fish. A couple had arrived by motorboat, and they were fishing for catfish in the Feeder just below the spillway. They had three or four fish about 12 inches long.

We got out the ultralights and small spinners and fished the lilypads in the dock area, and in an hour we had four small fish; three crappies (known in the swamp as "speckles") and a tiny yellow perch.

Lake Drummond looks as though it would be a great largemouth bass spot, especially around the cypress stumps and deadfalls that line the perimeter of the lake. Unfortunately, the water is high in tannic acid, producing a pH low enough to slightly inhibit fish life, especially species that are less tolerant of a slightly acidic environment. The dominant fish in the lake are catfish, speckles, yellow perch, and a little sunfish called a flier. Black bass were reportedly common in the lake at one time, but droughts and the increasing acidity of the lake have greatly reduced their number.

This is not to say that the fishing is without value. Saturday evening a family of five paddled into the campsite: a young Coast Guard couple with their twin six-year-old boys and a three-year-old. By dawn on Sunday morning the twins were intently casting worms and bobbers into the canal, and by the time we got out of the tents and went over to say hello, they had several fish on their stringer. Despite all the stories about the brevity of a six-year-old's attention span, the twins fished without interruption most of the morning. They would yell with excitement each time a bobber disappeared beneath the surface, and another perch or crappie was added to the stringer. We packed our gear as the boys fished, and they paused only long enough to wave as we paddled out the Feeder.

As we paddled, I thought about Colonel William Byrd and the boys fishing for crappies at the campsite. I haven't read a seventh grade textbook on Virginia history for quite a while, and I don't know if Byrd's comments on the Dismal Swamp are still being used. If they are, I would like to suggest that persons of a differing opinion be given equal space. If the authors of the textbook are in need of some quotes equal in color and passion to Byrd's, I know of two six-year-old boys who can supply them. □

Curtis Badger is director of publications for the Wildlife Art Museum of the Ward Foundation in Maryland and is a frequent contributor to Virginia Wildlife.

Superfly

It's the smallmouth "Strymph," and it's a super fly.

story & photos by Harry Murray

What in the world is a "Strymph," and why do many top bass anglers refer to it as the best all-around underwater fly available?

No, the Strymph is not the one and only underwater bass fly for all conditions, but let's look at a situation with which I was confronted recently.

Having only about two hours to fish early one morning before going to work, I wanted to make the best use of my time. During the past several mornings I had sometimes found the smallmouths in the riffles feeding on nymphs (the underwater form of aquatic insects) and sometimes in the deeper water feeding on minnows. Thus, I selected a stretch of the river with these two water types in close proximity to each other.

Not knowing just where the bass would be feeding, I started in mid-pool and fished downstream. Retrieving my fly with a slow, stripping streamer action that imitated movements, I took a fair number of smallmouths by the time I reached the end of the pool. Having a little time left, I went up to the head of the pool. This was very heavy water and required an upstream presentation to get my fly to the bottom with the floating line I was using. By casting upstream and retrieving my fly in a dead-drifting manner, I took quite a few more nice smallmouths. The fly? A Black Strymph, size 6.

The middle part of this specific pool held lots of sculpin minnows and the riffle was filled with hellgrammites, and the Black Strymph did an excellent job of passing for both. Not only did it look somewhat like these natural food forms, but it could be fished in a manner that duplicated their actions. This is extremely important, and unfortunately, in this day of exact look-alike imitations for both bass and trout, it is too often overlooked.

How did I happen upon this pattern? About 15 years ago, realizing the need for a fly pattern which could be fished both as a streamer to imitate minnows, as well as a nymph to imitate the underwater form of aquatic insects, I started experimenting. I used part of the approach Vince Marinaro, a good friend and fishing companion, had devised to develop improved fly patterns for his tough browns on the Letort. Vince would fish existing flies over trout he could actually see and as long as the trout showed any interest in the specific pattern, he continued casting. The number of looks a trout gave a particular fly were counted as "nods," as Vince called them. Once a fly failed to move a trout, it was replaced with another of different construction.

After exhaustive testing over many different fish, with dozens of flies, Vince would incorporate the main components of the flies receiving the greatest number of nods into one fly pattern. It really worked!

Since I would not be able to actually see the smallmouth's reactions to my flies, I decided to count the number of fish landed on each test fly. Fishing all patterns an equal amount of time over water of comparable quality, I reasoned, should give me a fair evaluation. I selected 10 of my most productive streamers and 10 of my best nymphs and laid them out on my fly-tying table. By mixing and matching the various body parts, I came up with a broad assortment of flies.

As I fished these patterns over the next several years, I kept close records of the catch, and then went back to my fly-tying vise to mix the best into the

Murray's Strymphs, left to right: cream, olive, and black.

Strymph and Food Matching Chart

Fly	Nymphs	Minnows
Black Strymph	Hellgrammite Dark Stonefly Dragonfly Leech	Sculpin Madtom
Olive Strymph	Damselfly Mayfly Caddis Larva	Sculpin Darter Shiner Long Snoot
Cream Strymph	Cranefly Larva Mayfly Caddis Larva	Chub Dace Silverside Shad Shiner

desired crossbreed. Some were lousy, some were fair, but some were outstanding. Looking at the winner, I don't know why I hadn't hit upon the fly pattern long ago—logic should have produced it.

The tail is the same ostrich herl which is used on the Murray's Hellgrammite, the best hellgrammite pattern I have used. The body is very fat special fur dubbing from Shenk's Streamers—that may be the best bass streamer around. The hackle is speckled Indian hen back that is used on many streamers and nymphs.

This basic pattern, in each black, olive and cream sizes 4, 6, and 8, will cover a tremendous number of bass needs. By altering the amount of lead in the underbody, there is hardly a situation that cannot be covered.

As I go across the country presenting fishing seminars, I am constantly amazed at the success stories I hear attributed to the Strymphs. It has also become the most favored pattern in my smallmouth fly fishing schools each summer. Plus, there is really no wrong way to fish a Strymph, and by logically evaluating the food available to the bass in each type of water and how they feed upon it, you will realize its full potential.

The sculpin minnows mentioned earlier are bottom huggers, living under and around grapefruit size rocks in areas of moderate current. They like cool, aerated water and can often be found below where a cool feeder stream enters a large river. The Black Strymph is very productive wherever sculpins are found.

I like to stay off to the sides of these areas and fish them down and across stream. After allowing my Strymph to sink to the bottom, I retrieve it with a very slow line-hand stripping action. I try to keep the fly as close to the bottom as possible during the retrieve, often mending the fly line to prevent the current from adversely affecting the drift.

The Black Strymph is also an excellent leech imitation in the slow water found in the middle portions of pools. Leeches are most active in low light situations, such as early and late in the day, and on heavily overcast days in

slightly discolored water. During these periods, fishing the slower areas with a gentle hand-twisting retrieve will take a lot of smallmouths.

These same low light periods also produce well to a Black Strymph fished in the madtom water. These minnows, which look like baby catfish, are also bottom huggers, but are readily available to the bass when they are out foraging for their own food in low light situations.

Rocky tails of the pools are real hot spots for madtom action. These areas can be approached from upstream as long as there is a good water level in the river. During these periods, long casts and gradual swings will usually do the job. Once the rivers recede in the latter part of the summer, I do better by coming into these tails from below and casting upstream. This prevents scaring the fish and enables me to take many more fish from each area than I would otherwise.

Many riffles have good hellgrammite populations and the Black Strymph works well here. I like to wade in below these areas and fish them straight upstream or up and across at a very slight angle. The demand here is twofold. First we must get our flies to the bottom, and then we must detect the strike when it comes.

Both of these tasks are simplified by fishing a short line; seldom over 30 feet, and normally 20 feet is better. Longer casts present an excessive amount of line to the current, which pulls our Strymphs up off the bottom. It also hides the fish's strike when he picks up the fly; the strike simply is not telegraphed back through all that slack line to a point where we can see it. And see it, we must! A comment I often hear from my students is, "Oh, I felt the strikes, but I just couldn't hook them." That's exactly right; if you are not aware of the take until you *feel* it, you will miss most of the bass when fishing upstream. I find that a nine-foot "Bright Butt Leader" with an indicator about four feet above the Strymph is a great help in strike detection.

The Cream Strymphs are hard to beat in waters containing chub min-

"I especially like the Olive Strymphs around aquatic grass beds. These areas contain great populations of damselfly nymphs, and the bass love them."

nows. These minnows may be distributed throughout the pools, but are often thickest close to the riffles. Chubs are more free-swimmers than the minnows mentioned earlier, and the bass come to know them well.

Fishing these across the fast water below riffles with only a slight darting action is very effective. Many beginning fly rodders do well with this tactic because strike detection is no problem, and once a tight line technique is mastered, the bass almost hook themselves.

A little more difficult technique with the Cream Strymph is what I call a "bounce retrieve." If the water is real fast, this tactic is often preferred. Casting upstream in these waters permits the fly to reach greater depths. To fish the "bounce retrieve," I use my line hand to maintain a tight line to the fly, while using the fly rod to lift the fly up off the bottom every several feet of the drift. As with dead drift nymph fishing, it is best to fish a short line on the "bounce retrieve."

I don't know whether or not the bass mistake the Cream Strymph for an injured chub minnow on the upstream "bounce retrieve." There are lots of cream cranefly larva in many riffles, and the fish may take it for one of these. Anyway you look at it, this is part of the justification for these flies—they pass for a variety of food forms.

I especially like the Olive Strymphs around aquatic grass beds. These areas contain great populations of damselfly nymphs, and the bass love them. If the water around the weeds is from two to four feet deep, I usually approach them from upstream on the river side. Casting my Strymph right at the water/grass edge, I impart a slow two-inch darting action. I make a special effort to keep the fly close to the grass as long as I can, because this is the hot spot. After retrieving my Strymph about 10 feet, I pick it up and recast it several feet downstream, continuing this process until I've covered the whole grass bed.

During the fall, grass beds are often outstanding, but low water causes the largest bass to become very wary. In these situations, the Olive Strymphs are still excellent, but it is best to approach the grass beds from below. Often, the bass will be lying along the downstream edges or just inside pockets along the main current edges.

The shallow gravel bars in many of our rivers are loaded with shiner-type minnows. Many of these minnows have a greenish-silver cast and the Olive Strymph is a good choice to use in these areas, also. Early and late in the day I often see disturbances out on these gravel bars as the bass move out to feed. The commotion is created as these schools of shiners race to avoid the fish. Casting an Olive Strymph out in front of the fleeing minnow and retrieving it back across the path of the onrushing bass usually does the job. If, however, there is no obvious feeding activity, you still have a good chance of catching a number of bass close to the gravel bars.

I like to position myself so I can cast my Strymph up onto the edge of the bar and strip it out into the deeper water close by. Bass are accustomed to minnows straying a little too far from home, and they will usually take the Olive Strymph just as it enters the deeper water.

Fly rods for this type fishing should be from eight and a half to nine feet long and loaded with a size seven or eight fly line. Be careful of soft tip Western dry fly rods; they are not comfortable to use with weighted flies. Single action lighweight fly reels are favored by most bass anglers. Weight forward bass bug tapered fly lines are ideal for this type fishing; floating models will cover most of the needs, but during high water conditions a number 3 sinking tip line can be helpful. Nine-foot leaders tapered down to 1X, 2X, and 3X work well with the floating lines and six-foot leaders tapered to the same tippets are best for sinking tip lines.

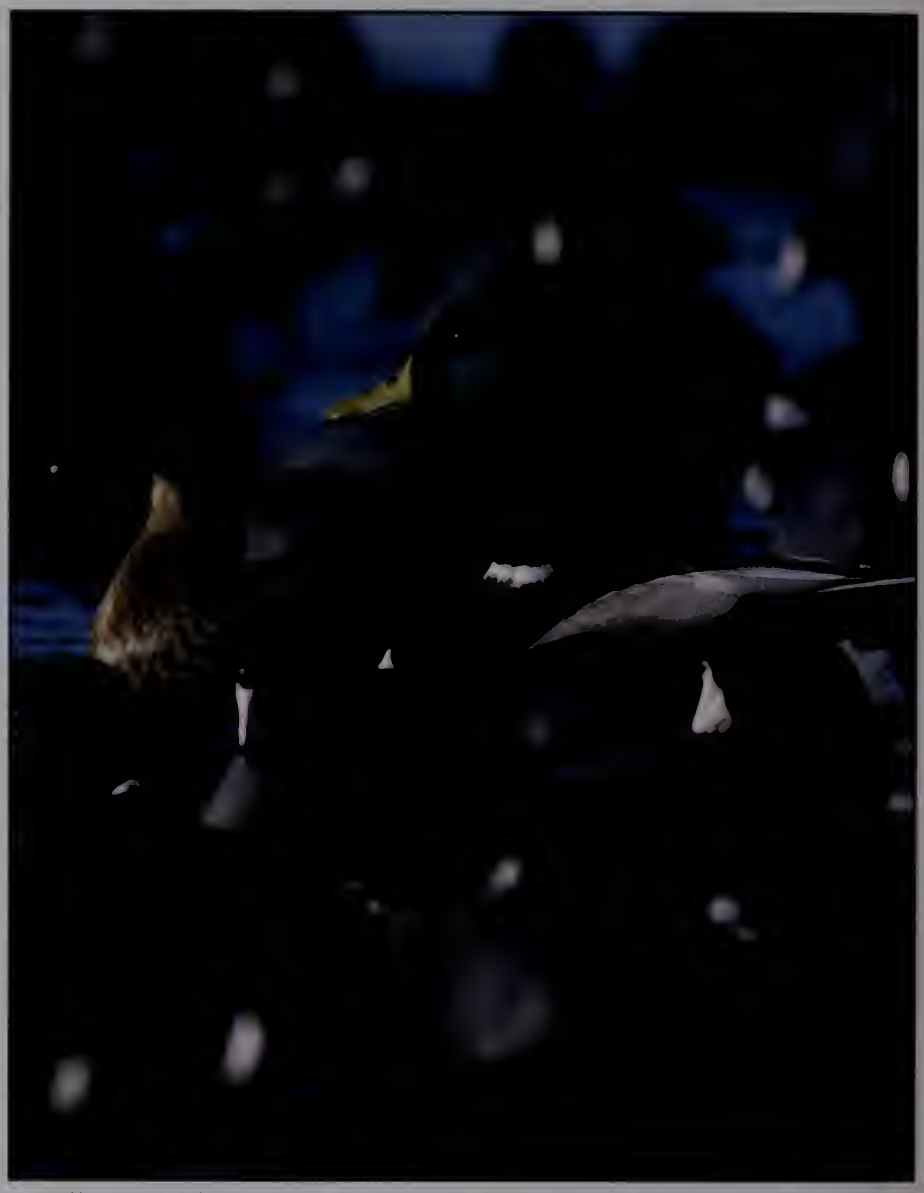
No, I'm not about to throw away all my other bass flies, but when I'm not sure just which fly to use, I normally start with a Strymph. They seldom let me down! □

Harry Murray is the author of the newly published book, Fly Fishing for Smallmouth Bass. *He also teaches fly fishing and fly tying in Edinburg, Virginia.*

by Jim Bowman

Do You Dial 911 For Wildlife?

For human emergencies, there are hospitals; for pets there are veterinarians—but what happens to sick and injured wildlife?



Die-offs in wildlife populations are more likely to occur where animals exist in high concentrations, like migrating waterfowl; photo by Lynda Richardson.

Have you ever thought about what happens to animals when they become injured or diseased? Well, if it happens to be your favorite pet or Farmer Jones' prize bull, then chances are that the local veterinarian will come to the rescue. In fact, today's animal health industry is enormous and offers everything from elaborate medical care to all-natural health foods for "man's best friend."

But what about the far greater number of wild animals that live in the forests, fields, and wetlands that surround us—can anything be done to prevent or treat disease and injury among our native wildlife? Usually the answer is "no" to actual veterinary treatment, except in unusual circumstances. Why? First of all, most cases of injury or disease in wild animals go undetected, and even when a disease problem is apparent, methods are not available to administer vaccines to wild animals on a large scale. Plus, very few vaccines exist that are effective against wildlife diseases. Secondly, it usually is impractical or impossible to capture and confine wild animals that may be sick or injured. Additionally, treatment for wild animals often requires special facilities and confine-

ment areas for recovery. Even if successfully treated, animals often cannot be released again since their injuries render them incapable of surviving in the wild.

There are, however, exceptions which often receive public attention. A good example of this is the recent case of a bald eagle in a western Virginia county that received a gunshot injury. The injured eagle was found by a hunter and transported to a wildlife rehabilitation center with a trained staff where it was successfully treated and released back into the wild.

Fortunately, at least one factor that often contributes to the spread of disease in domestic animals is usually not as great a threat to free-ranging wild animals. That factor is close confinement. Confinement usually means there is direct contact with other animals or their bodily discharges, which can mean direct exposure to parasites and diseases. Wild animals are usually dispersed within available suitable habitat. Most species either remain solitary during most of the year, or congregate in single or multiple-family groups. Even as family groups, however, they generally have little opportunity for disease exposure from sources outside the group. Therefore, the spread of disease among wild animals is often limited by behavior.

Notable exceptions to these behavior patterns are exhibited by some species, such as migrating elk and caribou herds, roosting concentrations of grackles, and seasonal concentrations of migratory waterfowl. When animals are congregated in numbers that may reach the tens of thousands, the potential for catastrophic diseases is significant.

A good example of a case requiring control of a potentially catastrophic wildlife disease occurred in Virginia in 1986. The scene was the quiet, attractive Washington suburb of Lake Braddock. Lake Braddock is a typical residential community that encircles the 22-acre lake for which it is named, plus an adjacent one-acre pond. A few years earlier, a small number of domestic Muscovy and Pekin ducks had been released on the lake for the enjoyment of community residents. Feeding the ducks became a popular activity, and the ducks quickly increased in numbers. Additionally, wild mallards and Canada geese from nearby lakes soon learned that an abundance of free food was available at Lake Braddock. Soon there were literally hundreds of ducks and geese residing year-round on the lake and pond. It is not difficult to imagine the unsanitary conditions that developed both within and surrounding these bodies of water. The stage had been set for disease introduction.

It was mid-June when residents first noticed that some of the domestic ducks on the pond were becoming ill and quickly dying. A herbicide had been sprayed to control poison ivy in the vicinity just two days earlier, so residents first suspected the herbicide to be responsible for the deaths. Ducks continued to die during the following days. Lake Braddock officials contacted several local, state and even federal agencies to seek help in determining why the ducks were dying and how the problem could be corrected. Unfortunately, Lake Braddock officals did not know the proper authorities to contact, so additional days passed before assistance was found. By that time, most of the ducks that resided on the pond had died. Finally, tissue samples were submitted to State Agriculture Department laboratories to analyze for chemical contamination, and the herbicide was eliminated as the suspected killer.

In early July, the Lake Braddock management was advised to ship the fresh carcass of a duck to the National Wildlife Health Center (NWHC) in Madison, Wisconsin for examination. The NWHC is a support unit of the U.S. Fish and Wildlife Service and is primarily responsible for diagnosis and control of wildlife diseases on national wildlife refuges. By the 10th of July, a laboratory diagnosis was confirmed. The Lake Braddock ducks were dying from a virus-induced disease known as Duck Virus Enteritis (DVE), also called "duck plague."

The wildlife disease experts recognized the serious implication of this diagnosis. The virus responsible for this disease was first identified in domestic ducks in the Netherlands in 1949. It was 1967 before DVE was first diagnosed in flocks of captive domestic ducks in New York. From there it quickly spread to other captive flocks in New York, Pennsylvania, Maryland, and as far away as California. In 1973, this same disease resulted in a massive die-off of more than 40,000 wild mallards on the Lake Andes National Wildlife Refuge in South Dakota. It has since continued to occur sporadically, primarily in captive flocks. Fortunately, no major outbreaks of DVE have occurred in wild waterfowl since the Lake Andes catastrophe. However, the results could be disastrous if the virus were to be introduced into the massive wintering concentration of wild migratory waterfowl along the East Coast.

The Virginia Department of Game and Inland Fisheries was immediately notified of the disease diagnosis by the NWHC. Although the Game Department normally is not directly concerned with diseases occurring in domestic animals, this DVE outbreak posed a serious threat to the wild waterfowl resource.

To prevent the spread of DVE from the Lake Braddock site to other nearby bodies of water, it was agreed that quick and drastic control measures would be required. First, it was explained to Lake Braddock officials and concerned residents that no cure or proven vaccine is available to combat the disease, and that wild waterfowl would be seriously threatened if the existing outbreak was allowed to continue. Disease experts advised that it would be necessary to humanely kill and incinerate the carcasses of all remaining waterfowl on the Lake Braddock area to prevent the virus from being carried to other bodies of water. It would also be necessary to decontaminate the lake and pond, plus all associated grounds used by the ducks in order to kill any DVE virus remaining in the litter, soil, and water. Other free-flying or migratory waterfowl should not be permitted to enter the site until the following spring. The extensive efforts of a dozen individuals

In Virginia, outbreaks of Epizootic Hemmoraghic Diseases (EHD), a virus-borne disease spread by biting gnats, afflict white-tailed deer, especially where deer populations are high. Wet conditions also increase the likelihood of the spread of the disease, due to the increased numbers of biting gnats at such times; photo by William Lea.

from cooperating federal, state and local agencies were required during ensuing weeks to complete the unpleasant task of removing all remaining waterfowl and decontaminating the site. More than 50 ducks had already died as a result of DVE infection. It was necessary to kill almost 500 additional ducks and geese on the site.

Although this was the first case of DVE reported in Virginia, experience elsewhere suggests that we can expect future occurrences of this disease. Although DVE perhaps poses a greater potential threat, other diseases at times also kill hundreds, and even thousands, of wintering waterfowl. Usually there is little that wildlife experts can do when this happens, except to monitor the situation and decontaminate the site to prevent further spread of the disease.

What about other wildlife? Yes, there are a host of diseases and parasites that can infect virtually all animals. For example, wildlife biologists investigated reports of sick and dead deer in several Virginia piedmont counties during September and October 1988. Laboratory analysis of tissue samples confirmed that Epizootic Hemmoraghic Disease (EHD) was present in a multi-county area of central Virginia. The virus-borne disease is spread by biting gnats, and usually ends its cycle with the onset of frost in the fall. Although deer deaths from EHD are not thought to have been extensive during this most recent outbreak, from 10 to 50 percent of infected animals may die. EHD has no human health implications.

Other common examples of wildlife disease that may be locally or regionally important are tularemia in cottontail rabbits, blackhead in wild turkeys and quail, and rabies and distemper in raccoons, skunks, and foxes. Fortunately, however, disease is generally not widespread in otherwise healthy wildlife populations. Animals able to obtain adequate high-quality food and protective cover are less likely to fall victim to disease than animals that are stressed due to inadequate nutrition or overcrowding. For this reason, the best way to minimize the occurrence and severity of diseases such as EHD is to promote healthy populations by establishing hunting seasons that keep animal numbers in check.

What should you do if you encounter a wild animal that appears to be sick or injured? Your first concern should be for human health and safety. You should not take the chance of being bitten or scratched by a wild animal. Although many diseases that infect wildlife are not communicable to man, some, such as tularemia and rabies, can have very serious human health implications.

If an animal is suspected of having rabies *and* there possibly has been human exposure to the virus, then your county health department should be notified immediately. The suspect animal will likely be killed to determine if it is rabid. Unless human health is involved, however, the health department may be unable to collect the animal for examination.

If you encounter other instances of wild animals that appear to be sick, especially if more than one animal is involved, then you should contact the Department of Game and Inland Fisheries. Perhaps the easiest Department representative to contact will be your local county game warden. You also may notify the Wildlife Division in Richmond by dialing (804) 367-1000 or 1-800-252-7717, and your message will be relayed to the nearest wildlife biologist.

The Game Department is interested in monitoring important wildlife diseases, especially those that may have major significance, such as DVE in waterfowl and EHD in deer. The Department is also keenly interested in identifying cases involving pesticide poisoning of wildlife. When you call, please be prepared to give details about when the problem was first observed, the animal species involved, how many sick or dead animals are involved, and the physical appearance and behavior of the animal. The biologist may be able to answer your concerns through a simple phone conversation, or you may be asked to collect and store specimens for the biologist to pick up for laboratory analysis.

You should be ever mindful that disease, injury, and death occur almost routinely within wild animal populations, and that it is often impractical or impossible to provide medical treatment and rehabilitation. Still, it is important to realize that the health of a population is the key to taking care of wildlife. If we can maintain a healthy environment with suitable habitat for a species to thrive, disease and injury will remain an insignificant killer of our wildlife. □

Jim Bowman is a supervising wildlife biologist with the Virginia Game Department.

Left and above; photos by Mel White.

Family Fishing Clinics '89

The Virginia Department of Game and Inland Fisheries' second annual family fishing clinics on June 3 were a big hit with youngsters across the state. Developed to encourage families to experience the fun of fishing, the Department's Water Resources Education Program and its generous cosponsors, McDonald's and the Virginia Bass Federation, launched five fishing clinics for kids around the state. Four hundred and twenty kids accompanied by their parents attended the clinics, learning basic fishing techniques, and enjoying the complimentary snacks provided by McDonald's. The restaurant also provided each child with a cane pole at the end of the day and food coupons for a complimentary lunch. Volunteer instruction was coordinated by the Virginia Bass Federation. Local sponsors provided essential services and help in organizing each clinic.

With thanks to all involved, we can only hope this introduction to fishing is just the beginning!

photo by Jeff Curtis

August Journal

Canoeing

by William Antozzi, Boating Safety Officer

For those who love boats and would like to get some good exercise, a canoe is the answer. Canoes, kayaks and jon boats are sort of like bicycles, because certain balancing skills are required. Even in calm water, everyone on board must concentrate on good balance until it becomes second nature. In warm summer waters when a capsized canoe dumps it occupants into the water, the experience may not be too bad, but if the water is frigid, the dunking can be extremely dangerous. Cold water takes heat from the body very much faster than air does, and death from hypothermia (or extreme lowering of the body temperature) can result.

A canoeist needs to learn basic skills in calm, warm, shallow water. Even under such conditions, however, a PFD must be worn. The bow paddler usually paddles on one side while the stern paddler or the other side not only provides power, but steers the canoe as well. When one or the other tires, the paddlers should switch sides. Both paddlers should not paddle on the same side at the same time.

Canoe occupants should keep their body weights low in the boat. It is best that the paddlers kneel, but they can sit on the built in thwarts (seats). All passengers should sit on the bottom of the canoe and use a backrest. If any occupants change seats, everyone should stay as low as possible and only one person at a time should move. To pass one another in a canoe, those passing should stay in the center of the canoe, with one spreading his legs while another crawls between them.

Gear which must be kept dry must be placed in waterproof bags with the openings tied tightly. A bailing device, such as a plastic jug with the bottom removed, should have the handle tied to a thwart. A first aid kit and a drinking water container must also be tied to the canoe. Bow and stern lines, a heaving line, and extra lashing line should be carried. A spare paddle is a must. If strong current or rough water is to be encountered, a protective helmet is required.

Canoeists should travel in groups of at least three boats so mutual help can be provided. No body of water should be negotiated unless it has been scouted. Surprises can be dangerous, such as a river which suddenly disappears ahead, indicating a waterfall. Anyone who falls into fast water should lie on their back, point feet downstream with legs together, and should not try to stand unless the water is too shallow for swimming. If a canoe capsizes in fast water, occupants should hang onto the upstream end. When a canoe turns sideways in a strong current, occupants should lean slightly toward the downstream side, thus presenting more canoe surface to the oncoming current.

A complete change of clothes and some blankets in a waterproof bag are a good idea. Wet clothes and cold feet can ruin the day. Valuables, including cameras, should also be in waterproof bags when not in use. Gear should be stowed so that it is balanced.

A person alone in a canoe can experience control difficulty in strong winds due to wind force pushing the bow off course. Two is better.

If there is a spill, persons should be assisted first, then cargo and equipment saved. Persons in the water must hang onto the canoe unless it would be dangerous to do so. A final note: All boatmen must watch the weather, even those in a canoe. □

Cape Charles Wildfowl Art Show

The Third Annual Cape Charles Wildfowl Show will take place on August 19-20 at the Cape Charles Volunteer Fire Company Building on Mason Avenue in Cape Charles. The buy-sell-swap show features Eastern Shore carvers and artists along with artisans from other areas. For more information, contact Jimmy Pruitt, 3 Tazewell Avenue, Cape Charles, VA 23310, (804) 331-2304. □

1989 Virginia Big Game Contest

The 50th annual Virginia Big Game Contest will be held this year in September. The Western Regional Contest will be held on September 8 and 9 at the Rockingham County Fairgrounds in Harrisonburg, located on U.S. 11, 1.6 miles south of exit 62 off I-81. The Eastern Regional and State Championships will be held on September 22 and 23 at Bruton High School, 185 Rochambeau Drive in Williamsburg.

Sponsored by the Virginia Department of Game and Inland Fisheries, the Virginia Peninsula Sportsmen's Association, Inc., and the Rockingham-Harrisonburg Chapter of the Izaak Walton League of America, this 50-year-old event will judge trophy whitetailed deer, black bear, and wild turkey legally taken during the 1988-89 hunting season. For Eastern Regional entry information, contact Boyd E. Skelton, Executive Director, IWLA, 412 N. Main Street, Bridgewater, VA 22812, 703/828-3393. Contact Charles A. Rogers, Virginia Peninsula Sportsmen's Association, P.O. Box 1933, Newport News, VA 23601, 804/220-3711 or Robert L. Faison at 804/357-7834 for the Eastern Regional and State Championships entry information. □

Trophy Hybrid Striper Taken From Leesville Reservoir

David Lambert of Altavista caught quite a prize at Leesville Reservoir this past May. Lambert used a shad to catch a potential world record 24 lb., 3 oz. hybrid striped bass which measures 35 ½ inches in length and 24 inches in girth. The current International Game Fish Association world record hook-and-line catch is 22 lbs., 6 oz., almost two pounds under Lambert's catch!

The hybrid striped bass is a cross between a male white bass and a female striped bass. Hybrid crosses are fairly rare and only occur between two closely related species. Under controlled hatchery conditions, such crosses can be produced in large numbers, but the trophy Lambert caught was probably a wild fish, since both white bass and striped bass occupy the same spawning tributary at Leesville.

Our congratulations to Lambert for a fine catch!—*Mike Duval, Department Fish Biologist.*

Nominations Sought for 1989 VWF Conservation Awards

This year's Virginia Wildlife Federation Conservation Awards program will be held on October 21, 1989 to recognize Virginia's outstanding conservationists. Thirteen categories have been designated for awards, covering the conservation areas of wildlife, soil, water, forests, clean air, rivers, education, legislation and communication. In the past, the Virginia Wildlife Federation, an affiliate of the National Wildlife Federation, has honored outstanding conservationists and organizations, such as Dr. Mitchell Byrd, Dr. Henry Mosby, the Chesapeake Bay Foundation, and the Piedmont Environmental Council.

Nominations for this year's awards must be postmarked no later than September 1, 1989, and nomination forms and additional information can be obtained by writing to: VWF, 4602 West Grove Court, VA Beach, VA 23455.

Correction

On page 10 of the June issue, we fell for a case of mistaken identities. The photo of a man and his coon dog is *not* Creed Smith and his champion "Clipper," but Jerry Caldwell of Roanoke County and his bluetick coon dog. The *real* Creed Smith and his $50,000 champion Walker, "Clipper," are pictured below. Our apologies to all men and dogs. □

photo by Bruce Ingram

Family Outdoors

Spike Knuth

Summer Vacation Fish

photo by Rob Simpson

Summertime is the traditional season for many familes to take their vacations. Frequently it is to some cabin on a lake for some boating, swimming and fishing. It's a pretty good bet that most angling hours are spent in the "good ol' summertime," especially during vacation periods and especially by those who don't get out fishing with the family too often.

There is a fish that won't disappoint family anglers. That's the bluegill, or bream (pronounced brim), as it is called in the South. The bluegill is the uncrowned "king of panfish" and summer is a good time to take them. It is a fish of quiet streams, ponds, park lagoons and small to medium-sized lakes, where it is found in prodigious numbers. The bluegill is a voracious feeder and usually is not too fussy as to what it feeds on. Insects and larvae of all kinds, worms and small crustaceans are also among their favorite natural foods. Its availability and willingness to bite makes the bluegill an ideal fish for family adventures.

A bluegill's color may be dark green, olive-green or a bluish green on its back, fading to yellowish green or silvery. They have five to seven dark vertical bars—like shadows—extending down on each side. The lower part of its gill cover and cheek are bluish (that's where it gets its name.) A bluegill's throat is yellow to bright orange—brighter during spawning. On its gill cover, or opercle, is a black flap which is a good identifying mark.

Bluegills spawn in mid-spring, with the specific time dependent on water temperatures in the various geographic locations. The male sweeps out saucer-shaped nests with its tail, in sandy or gravel-bottomed shallows. This is a good time to catch spring bluegills. The beds are easy to find and the fish become quite aggressive then.

Most vacationers, however, never see bluegills on their spawning beds. After spawning activities are completed, bluegills remain in the shallow waters for awhile as they roam and feed on the abundance of food harbored in newly growing weed beds. When vacation times starts in early summer, the sun begins to warm these shallows during the day, and the larger, adult bluegills begin to move into the cooler deeper water. Schools of bluegills will gather around dropoffs near the edges of weed beds, around sunken islands, off deep points or in river and creek channels. Here the schools spend daylight hours feeding as they move along underwater ledges. If available, topographical maps of lakes are quite useful in finding such underwater structure.

Taking the family fishing for bluegills in summer can be relatively simple. The needed fishing gear is relatively basic. Ideally, an ultra-light spinning or light spincasting outfit should be used, but bluegills are not fussy.

The methods of fishing are as simple as the gear. Boats should be anchored on the high part of the drop-off ledge to facilitate fishing into the deeper water, waiting for the schools to move through. If you don't have a depth finder, you can find the dropoffs by lowering your anchor—preferably two—down to 20 feet or however deep the ledge is, and row or drift into the ledge or bank. Try to get the anchors up on the ledge or imbedded so they'll hold. A light wind is often helpful in holding you there.

A number eight or 10 hook baited with garden worms, red wigglers, grubs, crickets or some other types of insect larvae completes the simple gear needed to fill a fish basket full of bluegills. To get the bait down quickly, it should be weighted with the proper amount of split shot. Lower the bait to the bottom, then raise it four inches to as much as two feet, experimenting at different depths to find fish. Fishing action may be sporadic. Schools move along the dropoff and each time they come by, four, five maybe six fish can be caught each time. After a short wait, the familiar rap on the tip of the rod, followed by the tugging, circling fight of a summer deepwater bluegill.

Action on summer bluegills need not be confined to deep water. Toward evening, the shallows begin to cool. Insects by the thousands hatch and hungry bluegills move in to feed. Fishing shallows with a small, light bobber, and using soft crickets for bait will produce good catches of bluegills. Early morning fishing is somewhat similar. The shallows remain cool until the sun begins its climb, and the bluegills will stay to feed. Look for them in the shade of piers, swimming rafts, and tree-shaded shores or points until the sun warms the water again.

Bluegills are one of the finest tasting of all panfish, if just rolled in seasoned flour and pan-fried. Without a doubt, one of the most popular family fish is the bluegill—the summer vacation fish. □

Habitat

by Nancy Hugo

Butterfly Bush

photo by Rob Simpson

As naturalist Antionette Pepin stood at the cash register to buy a parsley plant one day, the saleperson noticed there was a caterpillar munching on her plant. "The salesperson was horrified," says Pepin. "She offered to reduce the price of the plant." Little did the salesperson know that Antionette Pepin is a butterfly gardener and would have paid extra for the black swallowtail caterpillar.

Pepin knows that to have butterflies she must also have caterpillars, and that plants like parsley, dill, fennel, milkweed, violets, and clover are good sources of food for butterfly caterpillars. Adult butterflies, although generally less finicky than their juvenile counterparts, also have plant preferences.

It's the flower's color, shape, and the amount of nectar it holds that make it attractive to butterflies. Purple heads the list of butterflies' favorite colors, with yellow, pink, and white following in that order. Butterflies also like nectar-rich flowers with flower tubes short enough to allow them to reach the nectar with their proboscises. The "perfect" butterfly flower will also have a flat top, clustered florets, or large lipped petals that give the butterfly a place to perch comfortably while he sips the nectar. Some of the best butterfly flowers include goldenrods, asters, zinnias, verbenas, milkweeds, lantana, liatris, purple coneflowers and lilacs.

Of all the plants we might grow to attract adult butterflies, however, there are two that outshine the others in their popularity with butterflies. One is butterfly weed, the orange-flowered native perennial that lights up our roadsides in late summer (see *Virginia Wildlife*, September 1988). The other is butterfly bush, an introduced shrub frequently planted as an ornamental.

"If you can add only one shrub for butterflies, add the butterfly bush," says Antionette Pepin.

The most widely grown species of butterfly bush is *Buddleja davidii*. It is a shrub with long arching branches, pretty silvery gray foliage, and tightly packed clusters of honey-scented flowers that look something like lilac blossoms (hence the common name "summer lilac"). The flowers of the original butterfly bush species are bluish purple with orange centers, but there are horticultural varieties that bloom in colors from violet to deep purple, white, and pink, They all like full sun, but will grow in almost any well-drained soil.

Butterfly bushes bloom from late summer to fall. The species *B. davidii* blooms on new wood, so it should be pruned in early spring before new growth starts. Although it seldom dies back to the ground near my Ashland home, in colder areas (and in some winters) butterfly bushes die back to the roots or are badly injured in the cold, so they should be cut to within 12 inches of the gound. They will put out as much as 3-5 feet of new growth in a single season. Picking the spent flower heads off in the summer will also keep them blooming longer and prolong their usefulness to butterflies.

Fritillaries, swallowtails, red admirals, and painted ladies all love the butterfly bush but the list of butterflies visiting your butterfly bush in late summer or fall could be much longer. One naturalist reported counting no fewer than a dozen species of butterflies on his butterfly bush in a single day in July. Butterfly bushes are also beloved by hummingbirds who not only sip nectar from the blossoms but feast on the insects and spiders that are attracted to the flowers.

Grown in groups of more than one shrub and surrounded by other nectar-rich plants, your butterfly bushes will be even more effective in attracting butterflies. And don't forget to provide food for the larval butterflies; that caterpillar on your parsley may be a tiger swallowtail in disguise. □

Recipes

by Joan Cone

Whether you live in Tidewater Virginia or just visit there, you may return home with live crabs. Instead of picking and eating them immediately, you might prefer delicious crabcakes later.

The first step after cooking your crabs is to remove the meat from the body and claws. Then pack the meat into sterilized containers. The best way to keep crabmeat from drying out and losing its delicate flavor is to cover completely with whole milk, leaving one half inch on top for expansion. To prevent air from entering your containers, seal edges with masking tape. Frozen this way, crabmeat will keep up to a year.

Menu:
Cold Curried Soup
Crabcakes
Dill Potato Salad
Spiced Beets
Bourbon Plum Loaf

Cold Curried Soup

1 package (8 ounces) cream cheese, softened
1 can (10½ ounces) beef consomme
½ soup can water
¾ teaspoon curry powder
⅛ teaspoon garlic powder
Chopped fresh parsley

Place cream cheese in electric blender or processor. Add about ½ can consomme, curry powder and garlic powder. Blend or process just until smooth. Pour liquid in a bowl and add remaining consomme and ½ soup can water. Stir until mixed. Cover and chill several hours. Sprinkle with chopped fresh parsley. Makes about 3 cups.

Crabcakes

One of my college classmates gave me this recipe, and it is so delicious that I never order crabcakes in a restaurant. They are always a disappointment!

1 pound blue crabmeat, fresh or frozen
1 egg, slightly beaten
1 teaspoon salt
1 teaspoon dry mustard
1 teaspoon chopped fresh parsley
1 teaspoon Worchestershire sauce
2 tablespoons mayonnaise
1 egg for dipping
Dry bread crumbs
2 to 3 tablespoons butter or margarine

If frozen, thaw crabmeat in refrigerator and drain any liquid. Place meat in a medium bowl. Add egg, seasonings and mayonnaise, mixing lightly with a fork. If mixture does not hold together, add a small amount of flour. Form into cakes. Dip cakes into beaten egg and then coat with bread crumbs. Melt butter in a heavy skillet or electric frypan. Place cakes in hot butter and brown about 5 minutes on each side. Makes 4 or 5 cakes.

Dill Potato Salad

1 cup sour cream
½ cup mayonnaise
3 tablespoons vinegar
1 teaspoon salt
⅛ teaspoon pepper
1 tablespoon fresh, snipped dill or 1 teaspoon dill weed
4 cups sliced cooked new potatoes
1 cup thinly sliced celery
3 hard-cooked eggs, sliced
Fresh tomato wedges

In a small bowl, combine sour cream, mayonnaise, vinegar, salt, pepper and dill weed; mix well. In a mixing bowl, combine potatoes, celery and eggs. Add sour cream mixture and toss lightly. Chill several hours to blend flavors. Decorate with tomato wedges. Makes 5 cups.

Spiced Beets

1 can (1 pound) sliced beets
½ cup vinegar
½ teaspoon cloves
½ teaspoon allspice
½ teaspoon cinnamon
¼ cup pickle relish

Drain beets, reserving liquid. Add enough water to the liquid to make 1 cup. Add vinegar and spices and bring to a boil. Add beets; remove from heat. Chill beets in liquid. Drain and add relish. Makes 4 servings.

Bourbon Plum Loaf

2 cups flour
1 tablespoon baking powder
½ teaspoon salt
½ teaspoon cinnamon
2 eggs
1/3 cup vegetable oil
2/3 cup light brown sugar, packed
½ cup milk
1 cup chopped fresh plums
½ cup walnuts or pecans, chopped
¼ cup bourbon

Sift flour, baking powder, salt and cinnamon into bowl; set aside. Combine eggs, oil and sugar in large bowl; beat at medium speed until light and fluffy. Slowly mix in flour and milk alternately until all is incorporated. Stir in plums, nuts and bourbon. Pour batter into greased and floured 8½ x 4½ x 2½ inch loaf pan. Bake in a preheated 350 degree oven 1 hour or until pick inserted into center comes out dry. Let cool in pan on rack 10 minutes. Invert onto rack and let cool completely. Makes 1 loaf.

It's time to reorder your 1989-90 Virginia Sportsman's Calendar! Beginning with September 1989 and ending with August 1990, this calendar provides the sportsman with invaluable hunting and fishing information for the next 12 months—and it's only five bucks! Don't miss out—order yours now by filling in the gray card in the back of the magazine and sending your check in today!